

Remarks

Claims 1, 2, and 5-7 are pending in the application, of which claim 1 is in independent form.

Applicant thanks the Examiner for the courtesies rendered him and his attorney during the February 24, 2006 personal interview. The substance of the interview is set forth in the remarks presented below. The English language translation of JP'161 to which the Examiner refers in her interview summary is attached to and discussed in a 37 C.F.R. § 1.132 Declaration of Richard W. Pekala (Rule 132 declaration), which accompanies this amendment.

In the specification, paragraph [0032] is amended to correct misspelled words and paragraph [0039] is amended to present in express terms inherent subject matter, as discussed below.

Claims 1, 2, 5, and 6 stand rejected under 35 U.S.C. § 112, first paragraph, for failure to comply with the written description requirement. The Examiner states that the basis of the coating substance leaving intact the wettability properties imparted by the silica component is not fully supported by the specification. In accordance with the Examiner's instruction during the examiner interview, applicant has deleted the clause at issue to overcome the rejection.

Claims 1, 2, 5, and 6 stand provisionally rejected for obviousness-type double patenting over claims of copending U.S. Patent Application No. 10/154,937 ('937 application) in view of one or more references. Applicant disputes these rejections because the present patent application was filed in response to a January 29, 2003 restriction requirement issued by Examiner Laura S. Weiner for the '937 application. Applicant requests, therefore, that the provisional double patenting rejections be withdrawn.

Claims 1, 2, 5, and 6 stand rejected under 35 U.S.C. § 103(a) for obviousness on grounds set forth in the March 17, 2005 Office action. Applicant replies by referring to the Response to Arguments set forth in paragraph 11 of the November 22, 2005 Office action and the discussion about them during the February 24, 2006 examiner interview.

The Examiner's response and the interview discussion centered on the descriptions presented in Japan Abstract JP'161, which corresponds to Japanese Patent Application No. 1988-309711 ('711 application) of Nippon Muki. Applicant obtained an English language translation of '711 application (hereafter, Translation), which is attached to applicant's Rule 132 declaration that accompanies this amendment. The point noted in the

Examiner's interview summary is whether JP'161 discloses coating of an antioxidant material to form sheaths around polyolefin fibrils throughout the web. As demonstrated below, the Translation reveals a wealth of information about the Nippon Muki battery separator.

In paragraph 8 of his Rule 132 declaration, applicant notes that the Nippon Muki battery separator uses high-density polyethylene (HDPE), which would make a battery separator more susceptible to oxidation. Applicant also opines that he is aware of no lead-acid battery separator containing only HDPE. The claims of the present patent application recite ultrahigh molecular weight polyethylene (UHMWPE).

In paragraphs 12 and 15 of his Rule 132 declaration, applicant notes that Nippon Muki limits the antioxidant content to no greater than 1% and combines the antioxidant with a peroxide decomposition agent. The limited amount of antioxidant in combination with peroxide decomposition agent is required to prevent self-discharge. The Translation reveals, therefore, a restriction of antioxidant content in the Nippon Muki battery separator to achieve other objectives.

In paragraph 13 of his Rule 132 declaration, applicant computes an antioxidant-to-HDPE weight ratio of 0.0243, which corresponds to the maximum antioxidant content of the Nippon Muki separator. In paragraphs 10 and 11 of his Rule 132 declaration, applicant computes an antioxidant-to-UHMWPE weight ratio of 0.17, which corresponds to the minimum antioxidant content of the battery separator recited in claim 1. In paragraph 14 of his Rule 132 declaration, applicant states that a Nippon Muki separator with about 88% residual plasticizer oil content would result in antioxidant-to-polyethylene weight ratio that equals the 0.17 minimum ratio claimed. The 88% residual plasticizer oil content would, however, render the Nippon Muki battery separator nonviable.

As indicated above, claim 1 recites (and recited in its original form) a polymer web that includes UHMWPE. Applicant has amended claim 1 to recite an antioxidant-to-UHMWPE weight ratio of greater than about 0.17, which is approximately seven times the maximum antioxidant-to-HDPE weight ratio applicant computed for the Nippon Muki battery separator.


To support the amendment reciting the weight ratio of greater than about 0.17, applicant has amended paragraph [0039] of the specification to recite the content of the first and last sentences of paragraph 11 of the Rule 132 declaration. The amendment adds no new matter because the subject matter added is taken from and inherent in the original disclosure, as meticulously demonstrated in applicant's Rule 132 declaration.

Finally, applicant has added dependent claim 7 to recite 1.71 as an upper limit on the antioxidant material-to-ultrahigh molecular weight polyolefin weight ratio, which is supported by amended paragraph [0039].

Applicant believes his application is in condition for allowance and respectfully requests the same.

Respectfully submitted,

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